Monthly Award Winners

Flightline Safety
Award of Distinction

While supporting advanced short-range air-to-air missile test and development, a QF-4G was the primary target aircraft for an unmanned live-fire mission. During pre-launch drone system checks, the drone experienced an uncommanded disengage (drone reverts to cockpit control), coupled with a complete loss of telemetry data between the ground stations and the drone's on-board Automatic Flight Control System (AFCS). Extensive testing with flightline test stations revealed nothing abnormal and the failure was not duplicated. The drone Automatic Flight Control Computers (AFCC) were removed and analyzed for internal failures revealing nothing concrete; however, the back-up computer showed intermittent software lock-ups, so this AFCC was replaced. Maintenance personnel performed another operational drone check, this time with engines running, using the ground remote control station. During this check, this drone again experienced a complete loss of telemetry and went into an automated routine called an "escape." The check was terminated, and more rigorous ground troubleshooting was performed. This time a short was discovered in the Command Transponder System (CTS) 28 VDC supply circuit. This was traced to a terminal lug on the CTS 2 power switch contacting the panel's case and shorting CTS 2 power to ground. This condition had evidently existed intermittently and the terminal lug finally welded itself to the case. The engine-running drone checks were key to uncovering the problem because the switches in this panel are not used during external power tests. Because of the unpredictable nature of AFCS reaction to the problem, including conditions that would cause an unmanned drone to be lost, a one time inspection of the QF-4 fleet was ordered by the Lockheed Aerial Target's program manager in coordination with the drone system program office. To date, approximately half the fleet has been inspected with one aircraft found that required the terminal lug to be repositioned. In addition, British Aerospace has emphasized this malfunction at the drone conversion facility in Mojave, Calif., and with their subcontractor who supplies the affected panel and switch. Because of the discovery of this design flaw, the nominees saved the Air Force over $1 million in lost test assets and possible property damage or loss of life.

Mr. Frank K. Mobley, Mr. Jerry H. Everett, Mr. Danny C. Beasley, Mr. Timothy D. Davis, Mr. James A. Bearden, Mr. Lawrence Trahan, 82nd Aerial Target Sqdn., Tyndall AFB, Florida

Pilot Safety
Award of Distinction

Capt Rueschhoff was instructing Low Altitude Step Down Training (LASDT) as part of an A-10 Basic Surface Attack Mission on the Poinsett Range. After completing a series of turns at 500 feet Above Ground Level (AGL), the flight reset their altitude alert to 300 feet AGL and accomplished several turns. Capt Rueschhoff then rejoined to a wedge formation on the other flight member to conduct simulated attacks on the Poinsett Southern Target Array. During the first attack, approximately 3 Nautical Miles (NM) southwest of the target, the Master Caution Panel illuminated with a Right Hydraulic Reservoir light followed by a Right Hydraulic Pressure Low Light. Flying at 320 knots at 300 feet AGL, Capt Reuschoff's immediate concern was maneuvering away from the ground. Unknown to him at the time, the source of the hydraulic problem was a catastrophic right slat failure which sent numerous pieces of metal through the number two engine. He initiated a "knock-it-off" and climbed to 3,500 feet Mean Sea Level where he analyzed the situation and determined that the right side hydraulic system failure was accompanied by a right engine flameout. Capt Rueschhoff then applied the Engine Failure/Over Temperature/Compressor Stall checklist, declared an emergency, and then began preparing to accomplish a single-engine landing at Shaw Air Force Base, S.C. approximately 12 NM to the north. He configured the aircraft for a single-engine landing with gear, no speed brakes, and no flaps. During the single-engine approach, he focused on counteracting the adverse yaw associated with single-engine flight. The importance of this cannot be over-emphasized, as the failure to do this has resulted in three Class A mishaps in the A-10s history. On final, Capt Rueschhoff experienced a slight crosswind on the same side as his inoperative engine, making it more difficult to both counteract the single-engine adverse yaw and fly a proper ground track. He quickly recognized that the loss of right side hydraulics would prevent speed brake employment on landing roll and greatly increase the landing distance. He flew a flawless single-engine approach, touched down near the approach end of the runway, employed maximum aero braking, cautiously applied the brakes to stop on the runway available, performed a prompt and normal shutdown, and then egressed the aircraft. Capt Rueschhoff's exceptional in-flight reactions during LASDT and flawless execution of a complex single-engine approach prevented the possible loss of a valuable combat asset.

Capt Jason Rueschhoff, 75th Fighter Sqdn., 23rd Fighter Group, Pope AFB, North Carolina

Aircrew Safety
Award of Distinction

Lt Col Quinn and his weapons system officer, Capt Mendieta, took off as the third aircraft of an F-15E 4-ship Night Surface Attack Tactics Mission to Dare County Range, N.C. They were loaded with two external fuel tanks and a SUU-20N with 6 BDU-33s. On departure, they entered the clouds at 1,000 feet and flew radar trail in the weather to the range. As they began their descent into the range airspace, Lt Col Quinn lost all communications in the front cockpit. He could not transmit or receive on the Ultrahigh Frequency (UHF) radio and the aircraft intercom was inoperative. In order to get Capt Mendieta's attention, he began shouting. Capt Mendieta then let their flight lead, Titan 11, know the nature of their emergency and requested Visual Meteorological Conditions (VMC) airspace. At the top of the range airspace and still in Instrument Meteorological Conditions (IMC), Titan 11 declared an emergency for Titan 13 and coordinated separate clearances. Turning away from the lead element, Lt Col Quinn then flew radar trail off their wingman, Titan 14. Lt Col Quinn and Capt Mendieta continued shouting back and forth to communicate, while Capt Mendieta coordinated with Titan 14 on the UHF radio. En route to the initial approach fix at 10,000 feet Mean Sea Level, while dumping gas and flying radar trail in the weather at night, the indicated airspeed on both the heads up display and electronic altitude display indicator decreased to 14 knots indicated air speed. Additionally, all three channels of the Computer Aided flight controls also dropped off line. Lt Col Quinn transitioned to standby instruments and had Capt Mendieta request an immediate climb to VMC airspace. They immediately began to troubleshoot the compounding emergency and Lt Col Quinn reset the flight control switches. While their pitot heat remained on through the emergency, their indicated airspeed climbed to 120 knots and then decreased again to 14 knots. After approximately 4 minutes of erroneous indications, their indicated airspeed returned to 300 knots. As they commenced the Instrument Landing System (ILS) approach in radar trail with Titan 14, the weather was reported 800 feet scattered, 1,000 feet broken, with a crosswind component of 24 knots. Lt Col Quinn and Capt Mendieta executed a flawless ILS approach in steady winds and deteriorating weather. Their actions during this serious emergency directly contributed to the safe recovery of a $45 million Air Force asset.

Lt Col Vincent Quinn and Capt Shelly Mendieta, 4th Operations Group, 335th Fighter Sqdn., 4th Fighter Wing, Seymour Johnson AFB, North Carolina

Ground Safety
Award of Distinction

During a routine phase inspection as the left wing area supervisor, SSgt Newton noticed that an excessive amount of repairs were required on the engine auxiliary inlet doors, hinges, and safety wiring of the exhaust screens due to non-compliance with technical data governing safety wire and proper hinge staking. Upon further investigation, it was determined that the aircraft in question had recently returned from depot level inspection and indicated a quality control problem. Realizing that these discrepancies posed a serious Foreign Object Damage (FOD) hazard to the $200,000 TF-33 engines on the B-52, Sergeant Newton coordinated with 2nd Bomb Wing Scheduling and identified three other aircraft that had not been inspected since returning from depot. He performed a special inspection of over 192 auxiliary inlet doors, 384 hinges and 384 exhaust screens, photographing and repairing over 125 doors, returning aircraft to technical data standards. Photographs and supporting documentation of his findings were forwarded to Air Combat Command Logistics Division, 2nd Bomb Wing Quality Assurance Chief Inspector and Depot Quality Assurance, resulting in immediate corrective action, FOD prevention measures, and adherence to technical data at depot. The identified findings added specific inspection criteria to the 1B-52H-6WC-2 acceptance inspection work cards affecting the entire B-52 fleet of 94 aircraft, which included Minot Air Force Base, N.D., and the Air Force Reserve Component Wing at Barksdale. Aircraft in the process of depot inspection were inspected and repaired, as well as the ring cowlings located in the supply system. In addition, a special tool was manufactured and approved for use at field level to properly stake the inlet door hinges to prevent them from failing. Elimination of these defects at depot and field level dramatically reduces the possibility of inlet door hinges being ingested into aircraft engines causing catastrophic failure and safety of flight concerns.

SSgt Patrick M. Newton, 2nd Maintenance Sqdn., 2nd Bomb Wing, Barksdale AFB, Louisiana